

B.S. in Aerospace Engineering

Astronautics Plan of Study

Students should be aware that most courses in each academic year have prerequisites and/or corequisites (check the Undergraduate Courses section before registering for classes to ensure required sequencing). See the AE flowchart(s) from the department for the recommended plan of study.

Because of new courses being phased in, this option is recommended for new students only.

NOTE: Students in the Aerospace Engineering program desiring to complete a minor must complete at least six credit hours of coursework applied to the minor that are not specifically required in the student's degree program.

Year One

| | Credits |
|---|----------------|
| See the College of Engineering, Engineering Fundamentals Program for course selection | 33 |
| Credits Subtotal | 33.0 |
| Credits Total: | 33.0 |

Astronautics Option

Year Two

| | Credits |
|--|----------------|
| AE 201 Aerospace Flight Vehicles | 3 |
| COM 221 Technical Report Writing | 3 |
| ES 201 Statics | 3 |
| ES 202 Solid Mechanics | 3 |
| ES 204 Dynamics | 3 |
| ES 305 Thermodynamics | 3 |
| MA 243 Calculus and Analytical Geometry III | 4 |
| MA 345 Differential Equations and Matrix Methods | 4 |
| PS 160 Physics for Engineers II | 3 |
| PS 250 Physics for Engineers III | 3 |
| PS 253 Physics Laboratory for Engineers | 1 |
| Credits Subtotal | 33.0 |

Year Three

| | |
|---|-------------|
| AE 313 Space Mechanics | 3 |
| AE 314 Experimental Aerodynamics * | 1 |
| AE 315 Experimental Aerodynamics Laboratory * | 1 |
| AE 316 Aerospace Engineering Materials | 3 |
| AE 318 Aerospace Structures I | 3 |
| AE 319 Aerodynamics | 3 |
| AE 323 Spacecraft Systems | 3 |
| AE 414 Space Propulsion | 3 |
| AE 426 Spacecraft Attitude Dynamics | 3 |
| COM 219 Speech | 3 |
| EE 327 Electrical Engineering Fundamentals * | 3 |
| EE 328 Electrical Engineering Fundamentals Laboratory | 1 |
| MA 432 Linear Algebra | 3 |
| Credits Subtotal | 33.0 |

Year Four

| | |
|---|---|
| AE 416 Aerospace Structures and Instrumentation * | 1 |
|---|---|

| | |
|--|-------------|
| AE 417 Aerospace Structures and Instrumentation Laboratory * | 1 |
| AE 427 Spacecraft Preliminary Design | 4 |
| AE 429 Space Environmental Applications | 3 |
| AE 434 Spacecraft Control | 3 |
| AE 445 Spacecraft Detail Design | 4 |
| AE 442 Experimental Dynamics and Control * | 1 |
| AE 443 Experimental Dynamics and Control Laboratory | 1 |
| Humanities or Social Sciences Lower or Upper-Level Elective | 3 |
| Humanities or Social Sciences Upper-Level Elective | 3 |
| Approved Upper-Level Technical Electives | 3 |
| Approved AE Upper-Level Technical Electives | 3 |
| Credits Subtotal | 30.0 |
| Credits Total: | 129 |

Technical Electives

Two upper-level Technical Electives needs to be selected from the BSAE Approved Technical Electives list, in the areas of Engineering and Science, maintained by the AE Department. One Technical Elective must be a non-duplicating AE undergraduate or graduate course. The second Technical Elective can be any course on the BSAE Approved Technical Elective list. Proposed courses not on the list may be submitted to the AE Curriculum Committee.

Footnotes

* Lecture/Lab courses must be taken at the same time.